Tonal underspecification and interpolation in Tommo So

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A growing body of evidence (e.g. Pierrehumbert and Beckman 1988, Keating 1988, Myers 1998) supports the idea that, rather than the phonology feeding the phonetics a fully specified representation, underspecification may persist all the way to the surface. This typically results in either a linear interpolation between two flanking specifications or in a so-called “trough” as the articulators slouch between two identically specified values on either side (Pierrehumbert 1980). In African tone systems, it was traditionally maintained that underspecification was repaired by default insertion rules, supplying, for instance, the default L in Bantu or M in Yoruba (Pulleyblank 1986). However, more recent work, such as Myers (1998) on Chichewa, has shown that the surface realization of tone can remain underspecified.

In this paper, I show that tonal underspecification at the surface level may include a ternary distinction of /H/ vs. /L/ vs. /∅/. The evidence is based on recordings I gathered in the field for Tommo So, a Dogon language of Mali. Unlike Yoruba, the null third tone is not filled in with M but is instead realized as an interpolation between the specified lexical or boundary tones on either side. This is audibly distinct to non-native ears and confirmed by examination of f0 tracks. In the three pitch tracks in the appendix, circles represent the non-boundary tones in (a) HH L% H, (b) HL L% H, and (c) H∅ L% H. In (a), the f0 of the H on /ne/ flows smoothly into the H of the following word (the boundary tone deleting between two specified tones). The downward slope is due to general declination. In (b), the f0 falls during the consonant after the initial H to reach a relatively level L position on /ɲɛ/ before plummeting into a glottal stop. Finally, in (c), the f0 on underspecified /ge/ ‘the’ begins at nearly the same pitch as the preceding H tone and falls sharply throughout the vowel towards a L boundary tone; the following H is significantly lower after a realized boundary tone. Crucially, these interpolations are never seen on lexical stems, since underspecified tones are grammatically restricted to certain enclitics (postpositions and determiners) and the small class of nominal suffixes, the same kind of elements that are likely to be phonologically reduced in a stress language like English. Preliminary evidence also suggests that a word-final epenthetic /u/ may also be underspecified for tone. These facts could be captured naturally in Stratal OT, where *∅ is undominated at the first level and Dep-T highly ranked at later levels, where clitics or suffixes would be added. This also assumes final epenthesis happens later in the derivation (cf. Gouskova and Hall 2009).

Close examination of this tonal data adds to our body of knowledge on underspecification and contrast in the tonal domain, showing that a three-way contrast is possible. The distribution of underspecified tones also supports the typology of how grammatical elements are treated phonologically, with parallels between stresslessness and underspecification for tone.

Word count: 503

References


a. **HH L% H**
   
   [bé nínɛ][yɛllɛ]  ‘their aunt will come’

b. **HL L% H**
   
   [néɛnɛ][úrúgü ìnnɛ]  ‘the beggar doesn’t know how to pray’

c. **H Ø L% H**
   
   [ènɛ ì=ge][wó náá=ge][jɔbɔ-dɛ]  ‘the little goat’s mother will run’